



January 29, 2007

Charles L.A. Terreni  
Chief Clerk and Administrator  
South Carolina Public Service Commission  
Post Office Drawer 11649  
Columbia, South Carolina 29211

Re: Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.  
Power Plant Performance Report (December 2006)  
Docket No. 2006-224-E

Dear Mr. Terreni:

Enclosed are an original and one copy of the Power Plant Performance Report for Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc. for the month of December 2006.

Sincerely,

s/ Len S. Anthony

Len S. Anthony  
Deputy General Counsel – Regulatory Affairs

LSA/dhs  
Enclosures  
45612

c: John Flitter (ORS)

December 2006

The following units had no off-line outages during the month of December:

Brunswick Unit 1  
Harris Unit 1  
Robinson Unit 2  
Mayo Unit 1  
Roxboro Unit 2  
Roxboro Unit 4

Brunswick Unit 2

Full Forced Outage

- A. Duration: The unit automatically shut down at 05:39 on December 25, and returned to service at 12:37 on December 30, a duration of 126 hours and 58 minutes.
- B. Cause: Automatic Shutdown due to Oscillation Power Range Monitor
- C. Explanation: On December 24, the unit was operating at reduced power as a result of restraints imposed due to operation with one of two reactor recirculation pumps operable. The unit was scheduled to be removed from service on December 26 to conduct repairs on the 2A Reactor Recirculation Pump seal. While operating at 65% power, the unit experienced an automatic shutdown early on December 25 due to a trip signal generated by the Oscillation Power Range Monitors (OPRMs). The OPRM is part of the reactor protection system that is designed to ensure the core stays well within design limits, and noise observed by the instrumentation resulted in the automatic shutdown due to OPRM trip.
- D. Corrective Action: Corrective maintenance activities included repairs to the 2A Reactor Recirculation Pump seal and seal injection valve. Upon completion of repairs to the pump seal, auto scram investigations, and discussions with GE (OPRM vendor), the unit was returned to service.

Roxboro Unit 3

Full Scheduled Outage

- A. Duration: The unit was taken out of service at 10:36 on December 11, and returned to service at 03:08 on December 14, a duration of 64 hours and 32 minutes.
- B. Cause: Turbine Maintenance/Inspection
- C. Explanation: The unit was taken out of service to inspect the turbine and to remove turbine stop valve screens.
- D. Corrective Action: The turbine inspection and repairs were successfully completed, and the unit was returned to service.

Full Scheduled Outage

- A. Duration: The unit was taken out of service at 11:47 on December 14, and returned to service at 21:12 on December 14, a duration of 9 hours and 25 minutes. The unit was taken out of service at 23:15 on December 16, and returned to service at 03:45 on December 17, a duration of 4 hours and 30 minutes.
- B. Cause: Turbine Testing
- C. Explanation: The unit was taken out of service to perform turbine balance testing activities.
- D. Corrective Action: The unit was returned to service upon completion of the turbine balance testing.

	Month of December 2006		Twelve Month Summary		See Notes*
MDC	938	MW	938	MW	1
Period Hours	744	HOURS	8,760	HOURS	
Net Generation	719,217	MWH	7,190,783	MWH	2
Capacity Factor	103.06	%	87.51	%	
Equivalent Availability	99.79	%	85.51	%	
Output Factor	103.06	%	100.83	%	
Heat Rate	10,277	BTU/KWH	10,358	BTU/KWH	
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	562,800	6.85	3
Partial Scheduled	1,475	0.21	27,369	0.33	4
Full Forced	0	0.00	292,813	3.56	5
Partial Forced	0	0.00	291,394	3.55	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	697,872		8,216,880		8

\* See 'Notes for Nuclear Units' filed with the January 2006 report.

\*\* Gross of Power Agency

	Month of December 2006		Twelve Month Summary		See Notes*
MDC	937 MW		937 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	559,328 MWH		7,361,266 MWH		2
Capacity Factor	80.23 %		89.68 %		
Equivalent Availability	79.20 %		88.47 %		
Output Factor	96.74 %		98.54 %		
Heat Rate	10,526 BTU/KWH		10,538 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	231,001	2.81	3
Partial Scheduled	26,063	3.74	89,597	1.09	4
Full Forced	118,968	17.07	506,464	6.17	5
Partial Forced	0	0.00	82,379	1.00	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	697,128		8,208,120		8

\* See 'Notes for Nuclear Units' filed with the January 2006 report.

\*\* Gross of Power Agency

	Month of December 2006		Twelve Month Summary		See Notes*
MDC	900	MW	900	MW	1
Period Hours	744	HOURS	8,760	HOURS	
Net Generation	692,047	MWH	7,029,269	MWH	2
Capacity Factor	103.35	%	89.16	%	
Equivalent Availability	99.94	%	88.40	%	
Output Factor	103.35	%	100.78	%	
Heat Rate	10,638	BTU/KWH	10,850	BTU/KWH	
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	820,800	10.41	3
Partial Scheduled	394	0.06	1,224	0.02	4
Full Forced	0	0.00	79,650	1.01	5
Partial Forced	0	0.00	83,993	1.07	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	669,600		7,884,000		8

\* See 'Notes for Nuclear Units' filed with the January 2006 report.

\*\* Gross of Power Agency

	Month of December 2006		Twelve Month Summary		See Notes*
MDC	710	MW	710	MW	1
Period Hours	744	HOURS	8,760	HOURS	
Net Generation	562,380	MWH	6,442,698	MWH	2
Capacity Factor	106.46	%	103.59	%	
Equivalent Availability	100.00	%	99.09	%	
Output Factor	106.46	%	104.24	%	
Heat Rate	10,551	BTU/KWH	10,747	BTU/KWH	
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	0	0.00	3
Partial Scheduled	0	0.00	12,767	0.21	4
Full Forced	0	0.00	38,802	0.62	5
Partial Forced	0	0.00	4,782	0.08	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	528,240		6,219,600		8

\* See 'Notes for Nuclear Units' filed with the January 2006 report.



	<u>Month of December 2006</u>		<u>Twelve Month Summary</u>		<u>See Notes*</u>
MDC	745 MW		745 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	389,157 MWH		4,375,057 MWH		2
Capacity Factor	70.21 %		67.04 %		
Equivalent Availability	100.00 %		91.91 %		
Output Factor	70.21 %		71.23 %		
Heat Rate	10,453 BTU/KWH		10,623 BTU/KWH		
	<u>MWH</u>	<u>% of Possible</u>	<u>MWH</u>	<u>% of Possible</u>	
Full Scheduled	0	0.00	330,469	5.06	3
Partial Scheduled	0	0.00	36,953	0.57	4
Full Forced	0	0.00	40,130	0.61	5
Partial Forced	0	0.00	120,336	1.84	6
Economic Dispatch	165,123	29.79	1,623,255	24.87	7
Possible MWH	554,280		6,526,200		8

\* See 'Notes for Fossil Units' filed with the January 2006 report.

\*\* Gross of Power Agency

	Month of December 2006		Twelve Month Summary		See Notes*
MDC	670	MW	670	MW	1
Period Hours	744	HOURS	8,760	HOURS	
Net Generation	410,277	MWH	4,769,482	MWH	2
Capacity Factor	82.31	%	81.26	%	
Equivalent Availability	100.00	%	94.66	%	
Output Factor	82.31	%	83.05	%	
Heat Rate	9,257	BTU/KWH	9,370	BTU/KWH	
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	55,175	0.94	3
Partial Scheduled	0	0.00	181,417	3.09	4
Full Forced	0	0.00	71,411	1.22	5
Partial Forced	0	0.00	5,703	0.10	6
Economic Dispatch	88,203	17.69	786,013	13.39	7
Possible MWH	498,480		5,869,200		8

\* See 'Notes for Fossil Units' filed with the January 2006 report.

	Month of December 2006		Twelve Month Summary		See Notes*
MDC	707	MW	707	MW	1
Period Hours	744	HOURS	8,760	HOURS	
Net Generation	304,890	MWH	3,691,454	MWH	2
Capacity Factor	57.96	%	59.60	%	
Equivalent Availability	85.69	%	80.24	%	
Output Factor	64.80	%	71.98	%	
Heat Rate	10,298	BTU/KWH	10,200	BTU/KWH	
	<u>MWH</u>	<u>% of Possible</u>	<u>MWH</u>	<u>% of Possible</u>	
Full Scheduled	55,464	10.54	1,064,729	17.19	3
Partial Scheduled	3,027	0.58	48,895	0.79	4
Full Forced	0	0.00	0	0.00	5
Partial Forced	16,791	3.19	110,275	1.78	6
Economic Dispatch	145,836	27.73	1,275,114	20.59	7
Possible MWH	526,008		6,193,320		8

\* See 'Notes for Fossil Units' filed with the January 2006 report.

	Month of December 2006		Twelve Month Summary		See Notes*
MDC	700 MW		700 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	304,705 MWH		3,998,252 MWH		2
Capacity Factor	58.51 %		65.20 %		
Equivalent Availability	99.69 %		95.67 %		
Output Factor	58.51 %		66.10 %		
Heat Rate	10,459 BTU/KWH		10,557 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
Full Scheduled	0	0.00	77,770	1.27	3
Partial Scheduled	0	0.00	161,637	2.64	4
Full Forced	0	0.00	5,600	0.09	5
Partial Forced	1,639	0.31	20,567	0.34	6
Economic Dispatch	214,456	41.18	1,868,174	30.47	7
Possible MWH	520,800		6,132,000		8

\* See 'Notes for Fossil Units' filed with the January 2006 report.

\*\* Gross of Power Agency

Plant	Unit	Current MW Rating	January 2005 - December 2005	December 2006	January 2006 - December 2006
Asheville	1	198	67.75	59.96	72.44
Asheville	2	194	70.36	57.58	60.37
Cape Fear	5	143	71.61	70.49	72.32
Cape Fear	6	173	64.61	63.47	65.99
Lee	1	79	51.59	36.11	47.56
Lee	2	76	51.41	30.54	43.52
Lee	3	252	61.16	56.12	60.06
Mayo	1	745	75.91	70.21	67.04
Robinson	1	174	77.78	62.65	78.19
Roxboro	1	385	77.66	80.58	77.79
Roxboro	2	670	64.35	82.31	81.26
Roxboro	3	707	68.49	57.96	59.60
Roxboro	4	700	67.87	58.51	65.20
Sutton	1	97	51.17	30.41	44.30
Sutton	2	106	54.71	34.78	46.43
Sutton	3	410	59.66	59.42	54.54
Weatherspoon	1	49	44.37	14.94	36.15
Weatherspoon	2	49	42.93	11.50	37.40
Weatherspoon	3	78	61.89	24.37	50.52
Fossil System Total		5,285	67.22	62.24	65.25
Brunswick	1	938	94.38	103.06	87.51
Brunswick	2	937	86.02	80.23	89.68
Harris	1	900	100.59	103.35	89.16
Robinson Nuclear	2	710	92.77	106.46	103.59
Nuclear System Total		3,485	93.49	97.69	91.80
Total System		8,770	77.59	76.33	75.80

Amended SC Fuel Rule  
Related to Nuclear Operations

There shall be a rebuttable presumption that an electrical utility made every reasonable effort to minimize cost associated with the operation of its nuclear generation system if the utility achieved a net capacity factor  $\geq 92.5\%$  during the 12 month period under review. For the test period April 1, 2006 through December 31, 2006, actual period to date performance is summarized below:

Period to Date: April 1, 2006 to December 31, 2006

Nuclear System Capacity Factor Calculation (Based on net generation)

A. Nuclear system actual generation for SCPSC test period	A =	20,950,483	MWH
B. Total number of hours during SCPSC test period	B =	6,600	hours
C. Nuclear system MDC during SCPSC test period (see page 2)	C =	3,485	MW
D. Reasonable nuclear system reductions (see page 2)	D =	2,369,318	MWH
E. SC Fuel Case nuclear system capacity factor: $[(A+D) / (B+C)] * 100 =$			
101.4%			

NOTE:

If Line Item E  $\geq 92.5\%$ , presumption of utility's minimum cost of operation.

If Line Item E  $< 92.5\%$ , utility has burden of proof of reasonable operations.



Amended SC Fuel Rule  
Nuclear System Capacity Factor Calculation  
Reasonable Nuclear System Reductions  
Period to Date: April 1, 2006 to December 31, 2006

Nuclear Unit Name and Designation	BNP Unit # 1	BNP Unit # 2	HNP Unit # 1	RNP Unit # 2	Nuclear System
Unit MDC	938 MW	937 MW	900 MW	710 MW	3,485 MW
Reasonable refueling outage time (MWH)	160,194	0	829,590	0	
Reasonable maintenance, repair, and equipment replacement outage time (MWH)	316,117	765,152	80,268	45,402	
Reasonable coast down power reductions (MWH)	2,692	3,591	0	0	
Reasonable power ascension power reductions (MWH)	24,530	84,173	4,019	3,791	
Prudent NRC required testing outages (MWH)	15,318	27,288	36	6,384	
SCPSC identified outages not directly under utility control (MWH)	0	0	0	0	
Acts of Nature reductions (MWH)	0	0	0	774	
Reasonable nuclear reduction due to low system load (MWH)	0	0	0	0	
Unit total excluded MWH	518,851	880,204	913,913	56,351	
Total reasonable outage time exclusions [carry to Page 1, Line D]					2,369,318